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Notes on Some Light-Attracted Beetles from Louisiana (Coleop.).

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(Plate III.)

The following notes are based on a large assortment of light-attracted beetles, collected by E. R. Kalmbach, of the Biological Survey, during the summer of 1925[1]. All of the material was picked up under a single light on the outskirts of Gueydan, a small town about 30 miles from the Gulf Coast, in southwestern Louisiana. The collection probably contains a good proportion of the night-flying beetles of this locality, and offers a fine illustration of the possibilities of light collecting under favorable conditions.

Several hundred thousand specimens of beetles[2], representing more than 250 species of 34 families, were secured in about two dozen visits to the one light, during the period from early in May to late in August. Approximately one-fifth of the species taken are represented by good series, ranging in number of individuals from 8 or 10 up to many thousands each. The Carabidae, especially in the Clivini and the smaller Harpalini, outnumbered any other family in species and individuals, followed by the Dytiscidae, Hydrophilidae, Curculionidae, Scarabaeidae, Anthicidae, Staphylinidae, Chrysomelidae, Heteroceridae and Elateridae.

Of the species which came regularly and abundantly, *Lissorhoptrus simplex*, the rice water-weevil, probably heads the

[1]Many Hemiptera and a few Diptera, Hymenoptera and Orthoptera also were taken. Fortunately for the condition of the specimens of these orders, Lepidoptera were rarely encountered.

[2]It should be noted that Mr. Kalmbach kept, for each evening's representation, a sample only of the immense swarms that sometimes came to the light; the total number attracted, therefore, must have reached figures well into the millions. The subject of notable aggregations of insects is covered in an interesting article by Charles T. Brues, American Naturalist, LX, No. 671, Nov.-Dec., 1926, pp. 526-545.

list; one night's catch of this beetle numbered several thousand individuals. Others which appeared in profusion are:—*Enochrus ochraceus, Berosus* spp., *Celina angustata, Laccophilus* sp., *Bidessus* spp., *Monocrepidius bellus, Eulimnichus ater, Atacnius* and *Aphodius* spp. and *Anthicus* spp. Unusual features of the collection as a whole are the dominance of aquatic, subaquatic and epigeal forms; the scarcity of certain arboreal groups ordinarily met with at light,—such as the Cerambycidae, of which a single species only, *Stenodontes dasystomus* Say, was taken; and the presence of one species of *Sphenophorus* (*ludovicianus* Chttn.), the only record known to the writer of a member of this genus coming to light.

It is not desirable to go into detail here regarding most of the species, but three of them which happen to be little known or of more than usual taxonomic interest, are figured and briefly discussed.

Cyclocephala robusta Lec., a Scarabaeid described from Texas in 1866 but apparently not recently recognized, was collected at Gueydan in small numbers about equally divided between the sexes. Horn (71-336) states that *robusta* is the same as *nigricollis* Burmeister (47-54), basing the synonymy on an examination of typical specimens of *nigricollis* sent him from Europe by Leconte. Casey omits the Burmeister and Leconte names in his 1915 review of the Dynastinae, and Leng (18-260) lists both as unrecognized forms of *Spilosota* Csy. The rejection of Horn's synonymy, and the uncertainty regarding the systematic position of *nigricollis* and *robusta* are probably due, in large part, to the pronounced sexual differences which will be described later. The Gueydan species fits *robusta*, according to a comparison Mr. Banks kindly made with the Leconte type, and so far as I can see it agrees also, in all essentials, with Burmeister's description of *nigricollis*. It is significant that Burmeister mentions particularly the dark color and shining surface of his species, two very characteristic features which contrast strongly with the pallid coloration of the other *Cyclocephala,* most of which are now placed with *Ochrosidia* and *Spilosota*. The foregoing considerations leave no reasonable doubt that Horn's synonymy is correct, and that *nigricollis*

Burm., with its synonym *robusta* Lec., should be reinstated as a valid species in the North American list.

The generic position of *nigricollis*, however, is not clear. It belongs with either *Spilosota* or *Ochrosidia*, differing from the former in the shape of clypeus, dark color and more rounded ligular apex; and from the latter in the more widely separated middle coxae, darker color, and in its special combination of characters. Though there is little choice between the two generic assignments, it is perhaps better to place *nigricollis* provisionally with *Ochrosidia*, which already includes a considerable diversity of structural detail, rather than with the smaller and more sharply defined genus *Spilosota*. Granting the inclusion of *nigricollis* in *Ochrosidia*, the species will form the type of an additional section,—"Section C",— of Casey's Group I (15-142) as follows:—

Body stout; pronotum margined at base, the margin often more or less interrupted at middle; hind tarsi as in Section A; larger claw of anterior male tarsi simple, *i.e.*, uncleft; ♂ hairy, ♀ glabrous, above; color above, at least on elytra, darker than in any other *Ochrosidia*, ranging from reddish-brown to nearly black, pronotum paler. Section C. *nigricollis* Burm. (syn. *robusta* Lec.) Tex.; La.

Ochrosidia nigricollis Burmeister. Body robust, a little stouter and more convex in the ♀; more shining above, and with slightly coarser punctuation than in *villosa* or *immaculata*; ♂ darker above in general than ♀; head generally black or dark reddish, clypeus a little paler, pronotum in ♀ clear rufous except for the submarginal dark spot, in ♂ generally marked with a large dark cloud each side of middle in addition to the marginal spots. Elytra reddish to nearly black, a little paler than vertex of head.

Dorsum of ♂, including the pygidium but excluding the clypeus, clothed with fine erect hairs which vary from one-half to three-fourths length of scutellum; dorsum of ♀ glabrous except for some short hairs along sides of elytra, and a widely spaced row along sutural interval. Pronotum margined across base, the margin sometimes complete, but generally more or less interrupted, rarely entirely absent, at middle. Ligula oblong, sides subparallel from near base to apical fifth where they converge to the rounded or subtruncate apex. The

apical ligular lobes, so distinct in *immaculata*, etc., are here at most very feebly developed.

Length. 10- 12 mm. Sexual differences affecting the head, eyes, antennae and legs are figured.

Haltica ludoviciana Fall, another beetle taken by Mr. Kalmbach, is of some interest on account of its close superficial resemblance to certain *Luperodes*, such as *L. meraca*.

The ♂ is smaller than ♀, with the antennae relatively a little longer, and with the apical margin of the last ventral segment very feebly produced, at middle third, in a broadly rounded, transversely impressed lobe. The third and fourth tarsal segments, and the tips of first and second, are dusky. Length, 4.25-5.25 mm.

The Curculionid genus Micralcinus is represented in the Gueydan collection by two examples of an undescribed species, and is brought to notice here chiefly to point out its true antennal structure. Leconte (76-235) in describing *Micralcinus*, does not state the number of funicular segments, but assumably knew it to be 7, since he included his genus in the Ithypori with genera having a 7-segmented funicle. Blatchley did not have specimens but, believing the number to be 6, transfers the genus from the Ithypori to the Cryptorhynchini, placing it next *Tylodcrma* (16-488 and 494). As a matter of fact, the funicle is distinctly 7-segmented, both in the new species and in M. *cribratus* Lec., of which there is a small series in the National Museum collection. The organization of the body in general is also of a normal Ithyporid type, the shape of the scrobe and, more particularly, the structure of pro- and meso-sternum being diagnostic. In view of these facts, it is clear that *Micralcinus* belongs, as Leconte placed it, in the vicinity of *Conotrachelus*. It differs from any other of our Ithyporid genera in its free and simple claws, protuberant mesosternum, flat elytral intervals, and strongly developed prothoracic ocular lobes. The anterior coxae are narrowly separated,—about as in *Conotrachelus crataegi*.

External sexual differences of *Micralcinus*, taken from *M. cribratus* Lec, are;—♂ with a concavity at base of abdomen, and with fore tibiae distinctly arcuate; ♀ with the last abdominal segment deflexed upward (as in *Apion*) and arcuately flattened across apical fifth; legs shorter and stouter.

The two species are separated as follows:—

1. Femora unarmed; sides of pronotum subparallel in basal two-thirds; Florida ..... *cribratus* Leconte
2. Femora with a small tooth; sides of pronotum slightly converging from middle to base; Louisiana. *kalmbachi* n. sp.

Micralcinus kalmbachi, new species.

Length, 4.1 mm. (prothorax and elytra); width, 2 mm.; length of prothorax, 1.09 mm., width, 1.3 mm. Body oblong, ground color reddish, the elytra irregularly marked with black blotches. Vestiture of narrow, white, prostrate, scale-like hairs. Prothorax cribrately punctured.

Beak sub-cylindrical, evenly curved, rugosely punctured, bluntly carinate above, coarsely foveate between the eyes, very feebly set off from head; vestiture fine, sparse, and lying transversely. Head coarsely and closely punctured, the hairs shorter and closer than on beak. Eyes moderately convex.

Punctures of pronotum nearly meeting along middle, vestiture very sparse, but longer, especially at sides, than on beak or elytra. Elytra with humeri rounded, more prominent than in *Tyloderma foveolata*, less so than in *Conotrachelus naso*. Strial punctures large and close, the striae themselves not defined except on declivity; intervals nearly flat, the sutural slightly elevated on declivity. Scales 6 or 8 times longer than broad, prostrate except for an unevenly spaced, inclined row along alternate intervals (beginning with sutural), condensed in a patch at base of 3rd interval, and showing a tendency to form spots or transverse bands. The scales are unevenly distributed, being contiguous or slightly overlapping in a few places, widely separated in others, and extremely minute and sparse on the black areas. The black areas differ in size, shape and position on the two elytra, though the spot on declivity and the broad streak along margin from base to near apex appear to be more constant.

Under surface darker than above, vestiture, which is of hairs rather than scales, less appressed than above. Punctures large, not very dense, smaller and denser on 5th segment, —in no place approaching the size of the pronotal punctures. Tibiae nearly straight, shorter than femora. The femoral tooth, more strictly a denticle, is most prominent on the posterior legs, and hardly visible on the front pair.

2 ♀♀, Gueydan, Louisiana, Aug. 5, 1925, at light. E. R. Kalmbach.

Type, Cat. No. 40101, U. S. National Museum. Paratype in collection Biological Survey.

The mesosternal protuberance differs in the two examples, having its anterior face nearly perpendicular in the type, but slightly produced forward at apex, and consequently sloping backward in profile, in the paratype. In *cribratus* Lec. the sides of the elytra are a little more convergent apically, and the legs (♀) stouter, than in *kalmbachi*.

EXPLANATION OF PLATE III.

Figs. 1, 2, 3, 4, 5, and 6:—*Micralcinus kalmbachi*, n. sp. *1a*, posterior leg; *1b*, anterior leg. 2, anterior tarsus.

Figs. 7, 8, and 9:—Enlarged antenna, dorsal view of body, and posterior leg of *Haltica ludoviciana*.

Figs. 10 to 17 inclusive:—*Ochrosidia nigricollis*. 10, end view of tip of posterior tibia of ♀; 11, posterior tibia and tarsus of ♀; 12, same of ♂; 16, anterior tibia and tarsus of ♀; 17, same of ♂.

Collecting Experiences in Ecuador.

EDITOR ENTOMOLOGICAL NEWS:

Huigra, Ecuador,
Feb. 14th, 1927.

In response to your request for a letter for the NEWS, descriptive of my trip, and collecting experiences, during the three and a half months I have spent in this interesting "country of revolutions," I shall try to give you a brief account of my experiences in Ecuador.*

After awaiting the arrival of Mr. W. J. Coxey, of your city, who joined me in Guayaquil to make the trip with me through Ecuador, we took train to Huigra. I had letters of introduction to J. C. Dobbie, president of the Guayaquil & Quito Railway Company and also to Mr. F. J. White, Mr. Dobbie's assistant, who have their offices here. It happened that we met these gentlemen on the train going up and after presenting my letters, an invitation to tea the following afternoon and a game of tennis was extended. The next day we called at Mr. Dobbie's office and he presented us with letters giving us free transportation over

* See the NEWS for December, 1926, pages 325-328. Mr. Coxey's narrative of his expedition has been published in the *Year Book of the Academy of Natural Sciences of Philadelphia* for 1926, pp. 5-20, with photographic illustrations.—ED.

the entire line and furnished us with a gravity car to take our baggage to Kilometer Post No. 99, where we established our camp alongside of the railway track in a good collecting locality. Our camp was made a flag station and we could flag any and all trains at any time, which made it very easy to reach good collecting localities either up or down the track, and then flag any train available to return to camp. We spent ten days here and secured some good things. We then returned to Huigra and I went on to Quito, while Mr. Coxey remained a few days in Huigra.

Enroute to Quito one enjoys some beautiful scenery, picturesque huts and villages; quaint Indian venders visit the train to sell fruits, etc., but the crowning features of the trip are the superb views one gets (if it is clear) of Cotopaxi, Tunguragua, and the mighty Chimborazo towering something over 20,000 feet above sea level and the second highest mountain in South America. All the above are snow-capped and Tunguragua is an active volcano.

In Quito, one evening just before dinner, I was startled by loud shouting, the firing of rifles and crashing of glass. On looking out I saw thousands of men filling the streets who were being driven by mounted soldiers in front of them. These men, mostly students, remonstrated with clubs and stones, while the soldiers used their swords frequently and now and then a gunshot was heard. It lasted but two hours with one man killed and several injured and was one of those frequent uprisings which spring up here at a moment's notice.

On my return from Quito I stopped at Riobamba to visit friends and outfit with provisions, etc., for my trip into the interior. I had secured two men in Quito to accompany me and they arrived on the 16th of November on which day we left Riobamba with six burros for cargo and a mule which I rode, my two men and two Indian drivers going on foot. The first day was through a sandy desert-like country with much cactus, sand dunes and other desert characteristics. That night we slept in a schoolhouse and were off next day at 5 A. M. We crossed a very rickety bridge over which the burros had to be literally dragged; all cargo was unloaded and carried

across by hand. Our next difficulty was in passing with safety through a canyon near the foot of Tunguragua. The walls of this canyon were 100 to 150 feet high and composed of boulders, large and small, embedded in fine loose volcanic ash. The canyon was from 10 to 50 feet wide at the bottom where our trail led, and the wind whistled down it with great force, carrying a blinding cloud of volcanic ash as it went. The wind formed the canyon as no water ever flows in it and as the wind blew away the loose volcanic ash from around the boulders imbedded in the side walls these boulders came crashing down at intervals so numerous as to make it dangerous to pass, but there was no other way. You may imagine how I felt in a blinding dust storm groping along with boulders dropping in front and behind me, any one of which would have killed me had it struck me. I got through with safety as did also all the burros and all my men but one. One poor Indian driver was struck and had to be carried up out of the canyon, but after an hour's delay he recovered and we went on. One boulder struck a wooden box on the back of a burro and broke the half-inch-thick boards, but no really serious accident occurred, so we arrived in the small village of Baños that night at 7 o'clock very tired and for my part sore and lame, as I was not used to mule riding.

We rested a day in Baños and I collected a few things nearby, visited a beautiful waterfall which drops some 300 feet, and not 50 feet from this a large hot spring gushes forth and at about 100 feet the other side of the falls is some of the finest mineral water I ever drank. After a day's rest we went on to Yunguilia where I stopped ten days to collect, but collecting was not very good, so I took six mules and went on two days further to Mera where I stayed three weeks. Here, one evening at dusk, as I was busy at my table with sorting and papering the day's catch, I heard shouting and saw six men chasing a man who was carrying a large cutlass. On inquiry I learned that the man they were after had almost cut a man's head off. Sure enough, a moment later two women came leading this poor fellow to me for medical aid. This terrible gash gaped some three inches wide open, with the

blood spurting from arteries in all directions. The sight sickened me, I was no doctor and knew very little of what should be done, but there was no time to lose, so we laid the poor fellow down on a dirt floor and with the crude instruments and knowledge I had I set to work. I first bathed the entire wound in iodine and with alcohol, then dipping my butterfly forceps in iodine I caught the arteries one by one, pulled them out and tied each with a thread soaked in iodine. Then with needle and thread, dipped in iodine, I sewed up the great gaping wound and I had no idea the human hide was so tough. I broke four needles on the job and had to use the spool to force the needle through each stitch. After this another bath in iodine and cotton and bandages completed the job. I expected to hear any time he was dead, as the bone supporting the head could be plainly seen, so deep was the cut, but the night passed and he still lived. I called to take his temperature and read his pulse. I gave him a laxative and his brother got four Indians to carry him over the rough trails three-days' journey to Ambato to the clinic. After two weeks this poor fellow sent me a letter, thanking me for what I had done and the doctor added a note stating that the man would live, and he did, for I saw him in Ambato three months later on my return from the Oriente district.

Collecting in and about Mera was only fair though I did get one or two very good things, the prize being the large white *Morpho fruhstorferi*. After three weeks in Mera I sent one of my men two days' journey to Canelos to secure eight Indians to carry my cargo on to Puyo. We left at 9 A. M. but the trails were very bad and the walking was difficult and night overtook us before we reached our destination, so the Indians cut palm leaves and made a rude shelter to keep the rain off. On other palm leaves, which were spread on the ground for a bed, I laid down in soaked clothing without food, light, or even a smoke and spent the night wondering if I would get sick from my experience. Next day we were off at daylight, wading through mud and water in places knee deep and in one place one Indian sank in so deep that he could not extricate himself with the 75-pound pack he was carrying and had

to be pulled out. It rained torrents all the way and we arrived at 9 o'clock that morning in Puyo, pretty well tired out and soaked through and through. A delay of two days here was needed to secure other Indians and two canoes to go on to Indillyama, a one-day trip down the Pindo and Puyo rivers where we arrived safely after one or two exciting moments while shooting the rapids.

At Indillyama we secured eight other Indians for another hike over the mountains to Canelos. The trail followed a knife-like ridge a good share of the way and was better than the Puyo trail, but it rained all day and we had to cross three rivers which were high because of much rain and we were soaked up to our waists in crossing them. The Indians had gone on ahead and one of my men, who said he knew the trail, got lost and we were wandering about, yelling and shouting for help, when we gave up and had just completed a sort of rude shelter of leaves under which to spend the night, when an Indian came along and guided us across the river and to Canelos which was only a short distance farther down and which we reached at 7.30 P. M.

At Canelos another wait of two days was necessary to secure Indians and two canoes to take us three days down the Bobanaza River to my objective, Sarayacu, where I camped for one month and collected. I was unfortunate in striking the rainy season here, which made it difficult to get around, and secured only a small portion of what might be taken here if one could have sunshine. Out of three months I had but three three days of sunshine, with now and then a day when the sun would break through the clouds for from ten to twenty minutes at a time, two or three times a day. Such weather conditions considerably reduced the number of specimens I might have taken, but I shall never regret my trip as I passed through some very beautiful country along the Pastaza River. At Puyo one can take a canoe down the Pindo two hours to reach the Pastaza and then twenty-eight days down this and the Marañon to the mighty Amazon and Iquitos and then by steamer to Para and on to New York.

On my return it required four days to reach Canelos from

Sarayacu, as the canoes had to be poled up against the current. One day our canoe was passing under an overhanging tree and a small green snake dropped into it and almost into my lap. I brushed it out into the river. Another beautiful snake we saw crossing the river. Its colors were red, black and white bands and it was some four feet long. I secured a small monkey about 4 inches high with its tail twice that length from an Indian and paid him 5 barras of cloth for it. Everything has to be paid for with needles, cloth, mirrors, handkerchiefs, beads, earrings, finger rings, necklaces and other trinkets in dealing with the Indians, as they do not know the value of money.

When we arrived at Canelos on my return we secured eight Indians to each of whom I gave ten yards of cloth to take my cargo to Baños, an eight-days' trip. They took my cargo to Puyo, one day from Canelos. On getting up in the morning I found all my Indians had departed, taking the cloth with them. This delayed me three days more to obtain other Indians who took my things to Mera, where I secured mules to return to Baños and then to Pilileo where I got the train to Ambato and on to Riobamba next day. After a couple of days in Riobamba packing up things I had left there and visiting friends, I came on to Huigra where I have stopped another two days to see and thank railway officials and friends who had extended courtesies to me.

Tomorrow I leave for Guayaquil and on the 17th expect to take a Peruvian steamer to Buenaventura, Colombia, where I take train one day to Cali, collect there two weeks, then steamer to Cartago, mules to Ibague, across the Quindo pass and then train for Bogota, auto to Muzo where I expect to see the Government emerald mines and collect. Returning to Bogota, I take river steamer down the Magdalena River to Barranquilla and on to Puerto Columbia in train, where I get my boat to New York and the good old U. S. A. I will be able to give you a more detailed account of my trip when I see you in Philadelphia, as I expect to stop there a day or so on my return.

Very sincerely,

A. F. PORTER.